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United States
Department of
Agriculture

Soil
Conservation
Service

Boise
Idaho



WATER SUPPLY OUTLOOK FOR IDAHO

in Cooperation with Idaho State Department of Natural
Resources, Idaho Soil Conservation Districts, and NOAA,
National Weather Service



January 1, 1984

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Up to 75 percent of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data effecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent as surveyed and marked locations in mountain areas. These measurements are repeated in the same location near the same dates each year. Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Snotel (snow telemetry) networks of automatic snow water equivalent and related data sensing devices, are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. A joint Soil Conservation Service and National Weather Service report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs. This report can be obtained from Soil Conservation Service, National Technical Center, Rm. 510, 511 NW Broadway, Portland, Oregon 97209.

In California, the program is coordinated by the California Department of Water Resources. The Canadian provinces of British Columbia and Alberta have comparable programs.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states.

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	2490 W. 26th Ave., Diamond Hill, Bldg. A, Denver, Colorado 80211
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	Room 443, Federal Building, 10 East Babcock, Bozeman, Montana 59715
Nevada	50 S. Virginia Street, P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	Federal Office Building, 100 East B. Street, Casper, Wyoming 82601

WATER SUPPLY OUTLOOK
FOR
IDAHO
and
Federal-State-Private Cooperative Snow Surveys

Issued by
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Soil Conservation Districts
NOAA-National Weather Service
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FMC Corporation
Washington Water Power Company

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Soil Conservation Service
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WATER SUPPLY OUTLOOK for IDAHO



GENERAL STATEMENT FOR JANUARY 1, 1984

The January 1, 1984 snow surveys indicate snowpack conditions vary widely across the state ranging from below normal conditions in the panhandle region of northern Idaho to record high conditions in the extreme southern and southeastern part of the state. Snowpack conditions range from a low of 74 percent of average on the Coeur d'Alene drainage in northern Idaho to a high of 353 percent of average on the Owyhee drainage in southwest Idaho. Most stations on the south side of the Snake drainage from the Owyhee Mountains eastward to Bear River drainage in southeastern Idaho reported record high snow water contents for January 1 with many of these stations having snow water equivalents equal to or above the average April 1 snow water content.

Low elevation snowpacks are extremely high across the entire southern half of the state creating potential flood situations. Rapid thawing or heavy precipitation in the form of rain on these snowpacks could force streams to reach flood stage.

Precipitation, most in the form of snow, was well above normal with amounts as much as 300 percent above average for southern Idaho. Over the north averages were near to slightly below normal.

Temperatures were extremely cold with numerous records being set during the entire month. Temperatures averaged 6 to 10 degrees below normal with readings as low as 54 degrees below zero at Stanley.

Most mountain watersheds received above normal moisture prior to the snow accumulation season and soil moisture conditions are wet or saturated throughout the state.

Reservoir carry-over storage is near average to well above average in most reservoirs, ranging from 62 percent of normal in Coeur d'Alene Lake to 329 percent in Lucky Peak Reservoir.

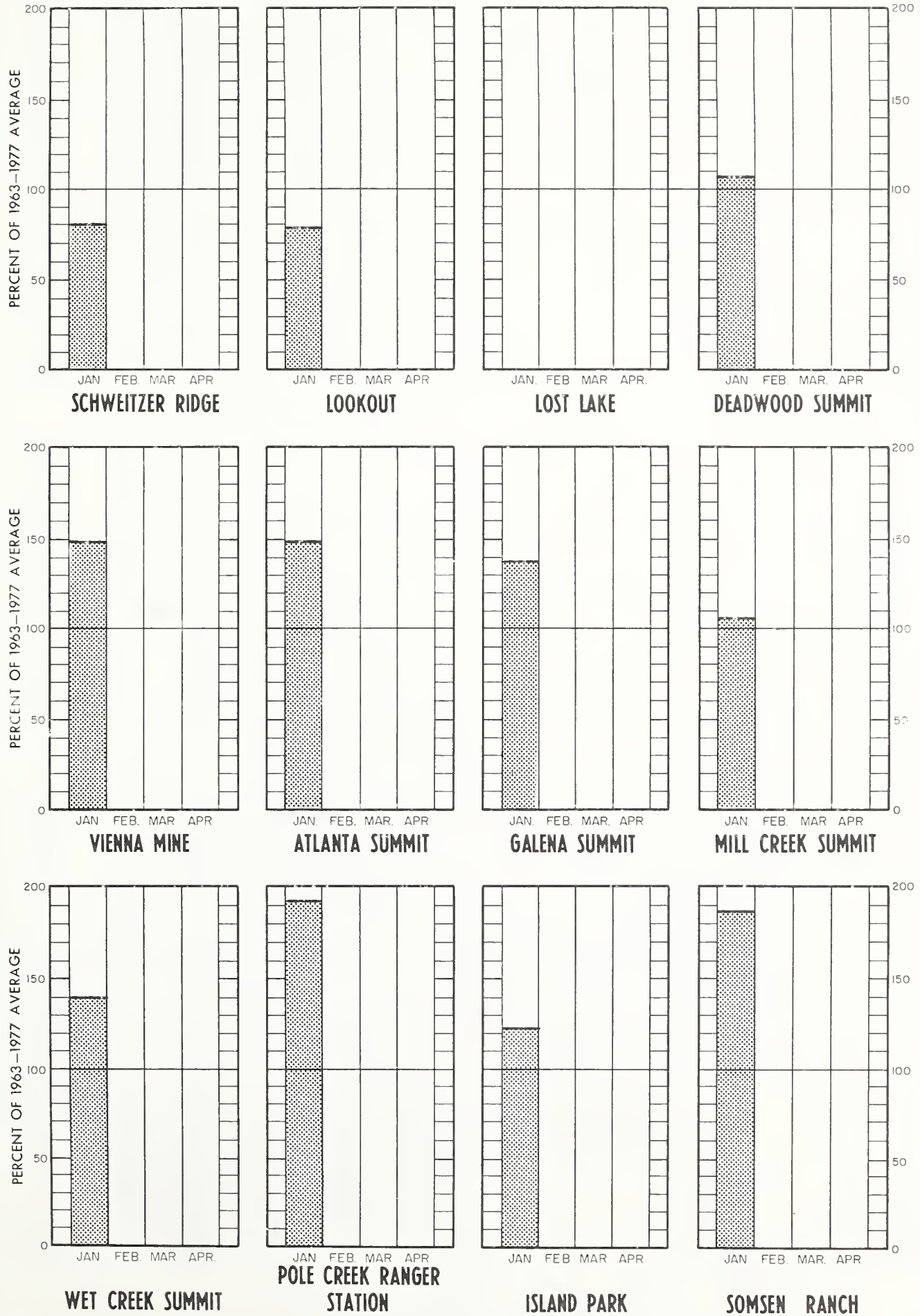
Carry-over storage in Salmon Falls Reservoir south of Twin Falls, coupled with the forecasted spring runoff for the Salmon Falls drainage, indicates this reservoir should fill to capacity for the first time since the dam was built in 1912. Oakley Reservoir, south of Burley is expected to fill to capacity for the first time since 1921.

Streamflow forecasts range from 95 percent of average on the St. Joe River in northern Idaho to 200 percent of normal on the Owyhee River drainage in the southwest corner of the state. Near normal precipitation for the remainder of the season will assure Idaho water users throughout the state of an adequate water supply for 1984.

SNOW WATER DEPTHS ACCUMULATION

For Selected Snow Courses

As Compared To 1961 - 1980 15 Year Average



COMPARISON of SNOW COVER

RIVER BASIN WATERSHED	NO.OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF :	
		LAST YEAR	1963-77 AVERAGE
<u>UPPER COLUMBIA RIVER BASIN</u>			
Kootenai River	23	72	63
Pend Oreille River	96	76	75
Clark Fork River	69	80	76
Clark Fork above Blackfoot, Mt	32	69	91
Lower Clark Fork below Missoula, Mt	9	82	81
Blackfoot River, Mt	14	81	74
Flathead River	27	70	74
North Fork Flathead	7	74	67
Middle Fork Flathead	7	61	61
South Fork Flathead	5	69	92
Bitterroot River	14	91	78
Priest River	4 - 5	70	86
Spokane River	4	77	82
Coeur d'Alene River	2 - 3	67	74
St. Joe River	1 - 2	145	95
<u>LOWER SNAKE RIVER BASIN</u>			
Clearwater River	8 - 14	95	87
North Fork Clearwater	4 - 9	96	91
Lochsa	3 - 4	96	80
Selway	1 - 2	89	76
Salmon River	15 - 18	86	111
Salmon above Salmon	5 - 7	97	131
<u>MIDDLE SNAKE RIVER BASIN - Northside</u>			
Little Lost River	2 - 3	71	126
Big Lost River	4	103	180
Little Wood River	4	74	152
Big Wood River	10 - 13	99	157
Big Wood River above Magic Reservoir	8 - 9	96	150
Camas Creek	2 - 4	107	204
Canyon Creek	2	133	--
Boise River	11 - 13	111	162
Middle Fork Boise	7 - 8	109	151
South Fork Boise	5 - 8	106	152
Payette River	13 - 15	90	127
South Fork Payette	5 - 6	107	153
North Fork Payette	8 - 9	78	111
Weiser River	4 - 6	74	109
Mann Creek	1	83	--
<u>MIDDLE SNAKE RIVER BASIN - Southside</u>			
Raft River	1	158	240
Goose-Trapper Creeks	1	--	231
Salmon Falls Creek	6 - 7	166	240
Bruneau River	2	162	209
Owyhee River above Owyhee Lake	1	186	353
<u>UPPER SNAKE RIVER BASIN</u>			
Upper Snake above Palisades Reservoir	17	119	126
Snake above Jackson, Wy	8	105	118
Gros Ventre, Wy	2	118	120
Greys River, Wy	1	178	186
Salt River, Wy	4	181	171
Camas-Beaver Creeks	2	57	116
Henrys Fork River	10	82	124
Teton River	6 - 7	114	144
Willow Creek	5 - 8	129	214
Blackfoot River	2 - 3	143	170
<u>GREAT BASIN</u>			
Bear River	6	198	200
Montpelier Creek	4	142	175
Mink Creek	1	156	220
Cub River	2	217	288

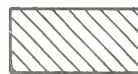
SNOW WATER DEPTHS
As percent of 1963 - 77 15 year average

JANUARY 1, 1984

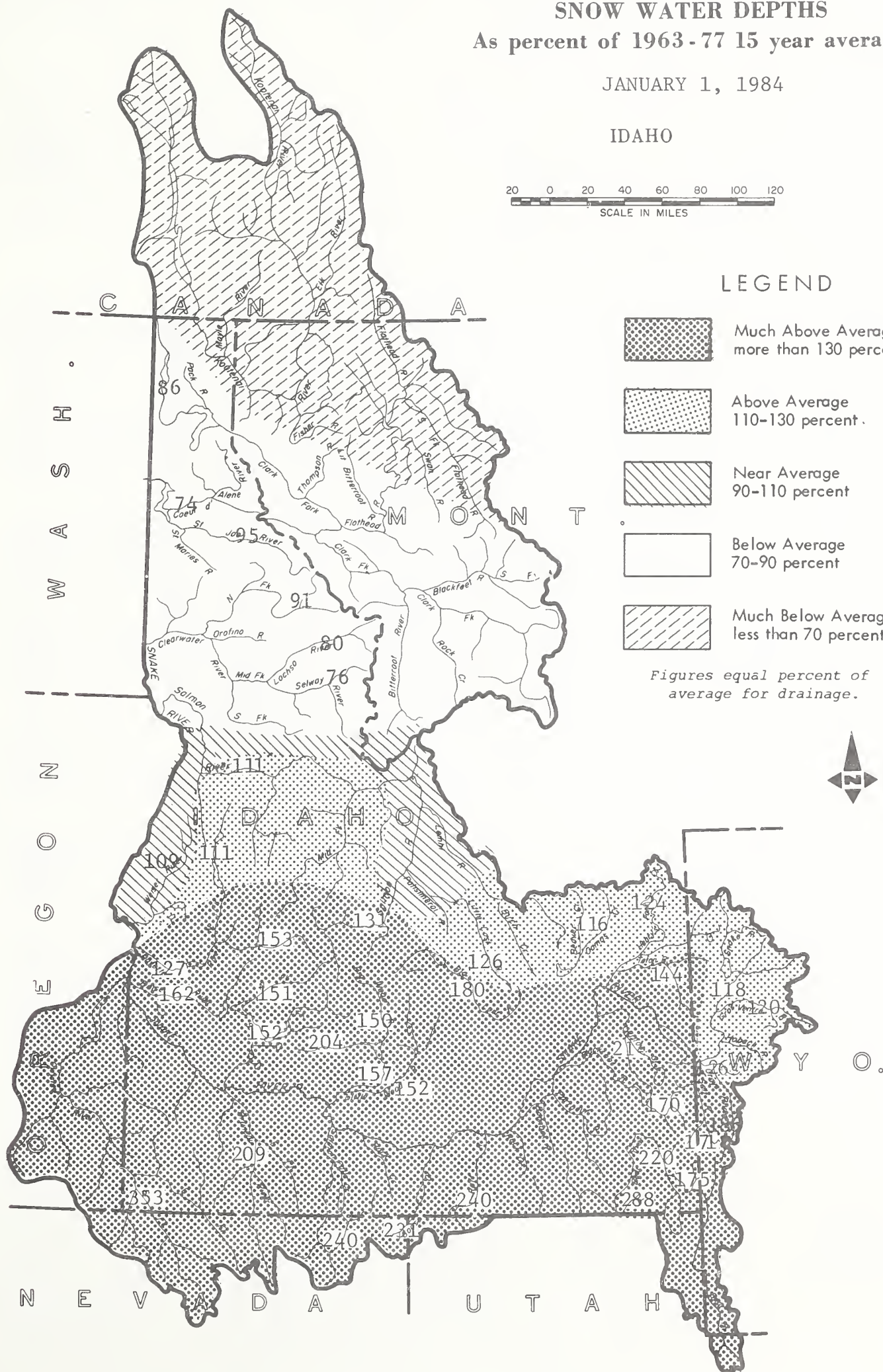
IDAHO



LEGEND



Figures equal percent of
average for drainage.



RESERVOIR STORAGE (1,000 Ac. Ft.)

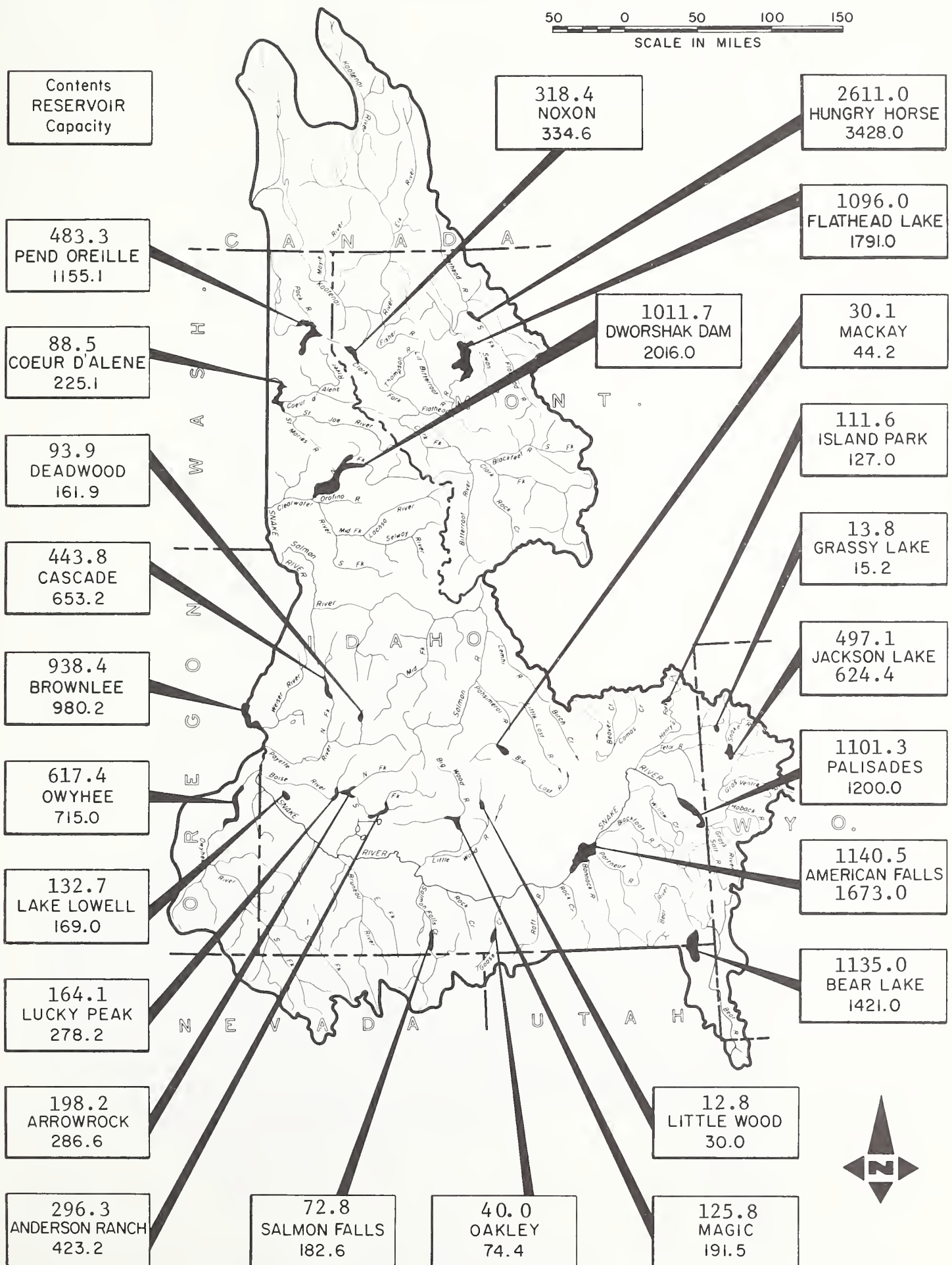
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR.	1963-77 AVERAGE
UPPER COLUMBIA BASIN				
Clark Fork - Pend Oreille				
Hungry Horse	3428.0	2611.0	3224.0	2299.0
Flathead	1791.0	1096.0	1284.0	1325.0
Pend Oreille	1155.1	483.3	427.0	331.2
Noxon	334.6	318.4	327.0	314.1
Spokane				
Coeur d'Alene	225.1	88.5	97.8	142.6
SNAKE BASIN				
Snake				
Jackson Lake	624.4	497.1	502.4	540.0
Palisades	1200.0	1101.3	1165.7	817.4
American Falls	1673.0	1140.5	1201.6	1296.9
Island Park	127.0	111.6	107.2	86.5
Grassy Lake	15.2	13.8	12.1	9.8
Brownlee	980.2	938.4	959.6	818.5
Goose-Trapper Creeks				
Oakley	74.4	40.0	25.2	22.6
Salmon Falls Creek				
Salmon Falls	182.6	72.8	39.1	41.6
Big Lost				
Mackay	44.2	30.1	37.8	25.5
Big Wood				
Magic	191.5	125.8	153.3	82.1
Little Wood				
Little Wood	30.0	12.8	22.9	12.7
Fish Creek				
Carey Valley	14.4	8.85	7.6	--
Boise				
Anderson Ranch	423.2	296.3	351.4	270.7
Arrowrock	286.6	198.2	120.0	202.5
Lucky Peak	278.2	164.1	212.1	49.8
Lake Lowell (Deer Flat)	169.0	132.7	130.2	108.5
Owyhee				
Owyhee	715.0	617.4	558.6	312.8
Payette				
Cascade	653.2	443.8	432.8	353.4
Deadwood	161.9	93.9	76.3	68.7
Weiser				
Mann Creek	11.1	4.9	6.9	--
Clearwater				
Dworshak	2016.0	1011.7	1179.5	--
GREAT BASIN				
Bear				
Bear Lake	1421.0	1135.0	1176.8	973.3
Montpelier Creek	4.05	2.45	2.45	--

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

JANUARY 1, 1984

50 0 50 100 150
SCALE IN MILES



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁺

UPPER COLUMBIA BASIN

KOOTENAI RIVER

Leonia	(at)	8350	97	Apr-Sep	--	8602
		7260	97	Apr-Jul	--	7498
		5870	97	Apr-Jun	--	6051

PEND OREILLE RIVER

Clark Fork River

Whitehorse Rapids	(at)	11100	82	Apr-Sep	--	13575
		10100	82	Apr-Jul	--	12351
		8640	82	Apr-Jun	--	10570

Pend Oreille Lake Inflow

		12700		Apr-Sep	--	--
		11400		Apr-Jul	--	--

Priest River

Priest River 1/	(at)	941	105	Apr-Sep	--	895
		885	105	Apr-Jul	--	841

SPOKANE RIVER

Post Falls 2/	(at)	2730	95	Apr-Sep	--	2860
		2640	96	Apr-Jul	--	2756

St. Joe River

Calder	(at)	1230	95	Apr-Sep	--	1294
		1160	95	Apr-Jul	--	1225

SNAKE RIVER BASIN

SNAKE RIVER - MAIN STEM

Moran 3/	(at)	1080	122	Apr-Sep	--	885
Palisades Inflow 3/		4695	124	Apr-Sep	--	3798
Heise 4/	(nr)	4900	121	Apr-Sep	--	4066
		4170	120	Apr-Jul	--	3465

Blackfoot 5/	(nr)	6500	120	Apr-Sep	--	5430
		5300	120	Apr-Jul	--	4429

Henrys Fork

Ashton 6/	(nr)	790	111	Apr-Sep	--	714
		597	113	Apr-Jul	--	529

Rexburg 7/	(nr)	1680	114	Apr-Sep	--	1475
		1330	115	Apr-Jul	--	1153

Teton

South Leigh Creek	(ab)	225	116	Apr-Sep	--	194
		170	117	Apr-Jul	--	145

Portneuf River

Topaz	(at)	157	154	Mar-Sep	--	102.1
		127	155	Mar-Jul	--	82.2

Oakley Reservoir Inflow

		54	179	Apr-Sep	--	30.2
		49	180	Apr-Jul	--	27.2

Salmon Falls Creek

San Jacinto	(nr)	168	179	Mar-Sep	--	94.0
		160	179	Mar-Jul	--	89.3
		151	179	Mar-Jun	--	84.4

Bruneau River

Hot Springs	(nr)	412	170	Mar-Sep	--	243
		394	170	Mar-Jul	--	232

Little Lost River

Howe	(nr)	54.6	130	Apr-Sep	--	42.2
		42.4	130	Apr-Jul	--	32.6

Wet Creek	(bl)	49.5	128	Apr-Sep	--	38.8
		40.2	128	Apr-Jul	--	31.4
		32	128	Apr-Jun	--	25.0

(c) Assuming normal meteorological conditions.

+ 1961-1980 period

PROSPECTIVE STREAMFLOW

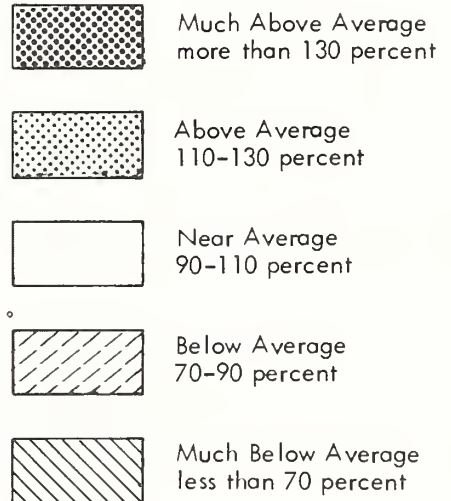
Based on Snow Surveys made on approximately

JANUARY 1, 1984

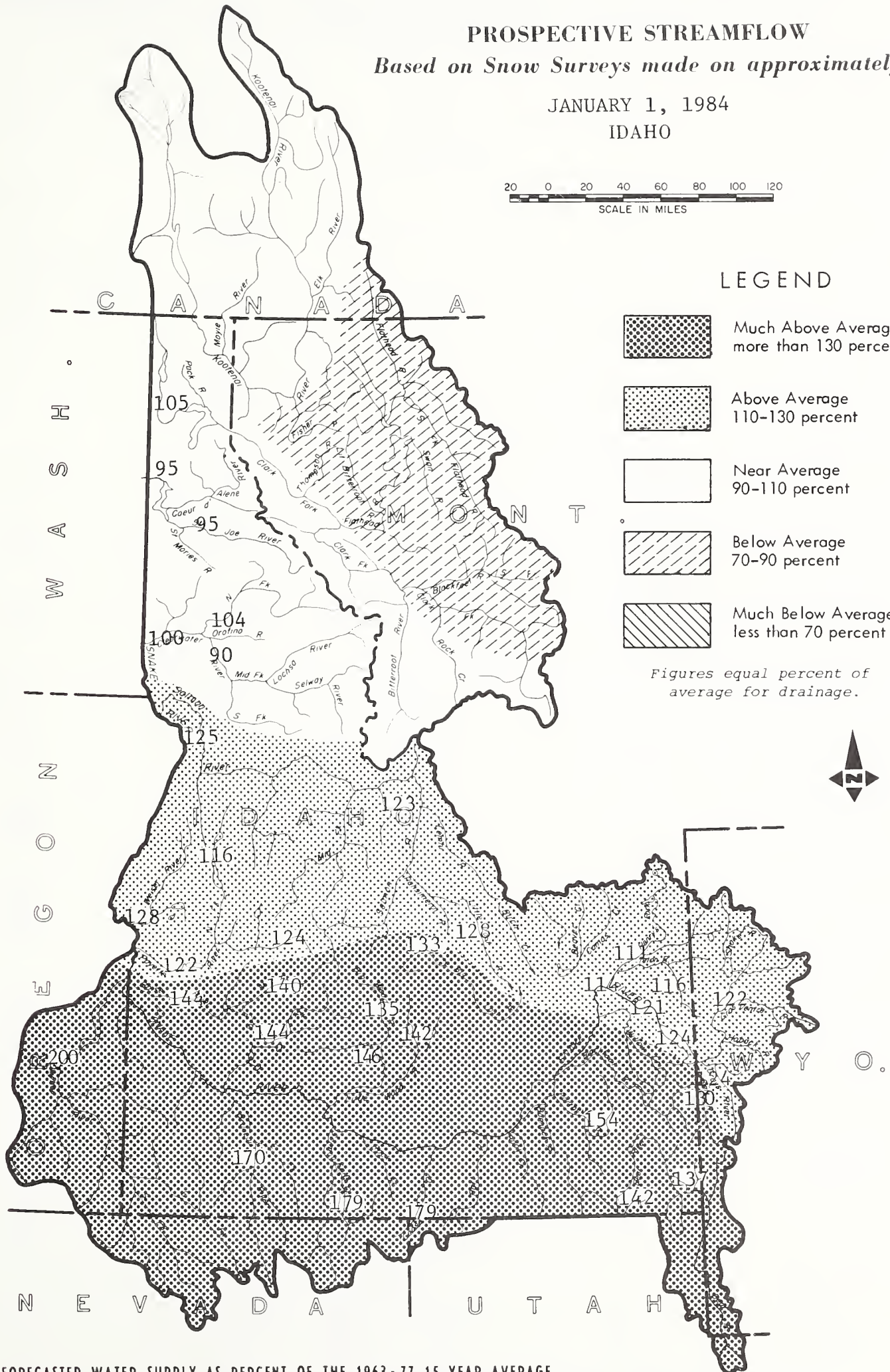
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20 0 20 40 60 80 100 120
SCALE IN MILES

LEGEND



Figures equal percent of average for drainage.



FORECASTED WATER SUPPLY AS PERCENT OF THE 1963-77 15 YEAR AVERAGE

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT		THIS YEAR			PAST RECORD	
		FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
		Thousand Acre Feet	Percent of Average		Last Year	Average [†]
<u>Big Lost River</u>						
Howell Ranch	(at)	281	133	Apr-Sep	--	211
		249	134	Apr-Jul	--	186
		193	134	Apr-Jun	--	144
Mackay 8/	(nr)	250	136	Apr-Sep	--	184
<u>Big Wood River</u>						
Bellevue	(nr)	261	135	Apr-Sep	--	193
		244	136	Apr-Jul	--	180
Magic Reservoir		446	146	Mar-Jul	--	306
Inflow 9/		431	146	Apr-Sep	--	295
		409	146	Apr-Jul	--	280
<u>Little Wood River</u>						
Carey 10/	(nr)	143	142	Apr-Sep	--	101.0
		132	142	Apr-Jul	--	93.1
		117	142	Apr-Jun	--	82.6
<u>Boise River</u>						
Twin Springs	(nr)	985	140	Apr-Sep	--	705
		922	142	Apr-Jul	--	650
Boise 11/	(nr)	2260	144	Apr-Sep	--	1571
		2100	144	Apr-Jul	--	1454
		1842	144	Apr-Jun	--	1279
<u>South Fork</u>						
Anderson Dam 12/	(at)	850	144	Apr-Sep	--	590
		794	144	Apr-Jul	--	551
<u>Owyhee River</u>						
Gold Cr., Nv 13/	(nr)	50.0	185	Apr-Jul	--	27.1
Owyhee, Nv 13/	(nr)	180.0	219	Apr-Jul	--	82.1
Lake Owyhee		752	200	Apr-Sep	--	376
net inflow 14/		1200	214	Feb-Jul		561
Rome	(at)	1285	215	Feb-Jul	--	598
<u>Payette River</u>						
Horseshoe Bend 15/	(nr)	2210	122	Apr-Sep	--	1805
		2040	122	Apr-Jul	--	1668
<u>North Fork</u>						
Cascade 16/	(at)	643	116	Apr-Sep	--	553
		603	116	Apr-Jul	--	518
Banks 16/	(nr)	833	117	Apr-Sep	--	712
		785	117	Apr-Jul	--	671
<u>South Fork</u>						
Lowman	(at)	615	124	Apr-Sep	--	497
		547	124	Apr-Jul	--	441
Deadwood Reservoir Inflow		177	123	Apr-Jul	--	144
<u>Weiser River</u>						
Weiser	(nr)	567	128	Apr-Sep	--	442
		716	128	Mar-Sep	--	558
		531	128	Apr-Jul	--	414
<u>Salmon River</u>						
Whitebird	(at)	9000	125	Apr-Sep	--	7188
		8135	125	Apr-Jul	--	6497
Salmon	(nr)	1380	123	Apr-Sep	--	1123
		1180	123	Apr-Jul	--	960
<u>Clearwater River</u>						
Orofino	(at)	5000	100	Apr-Sep	--	5308
		4740	100	Apr-Jul	--	5029
Spalding	(at)	8630	100	Apr-Sep	--	8672
		8160	100	Apr-Jul	--	8192

(c) Assuming normal meteorological conditions.

+ 1961-1980 period

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁺
North Fork Clearwater					
Dworshak Reservoir Inflow	3170	104	Apr-Sep	--	3040
	2970	104	Apr-Jul	--	2845
GREAT BASIN					
BEAR RIVER					
Harer (at)	553	178	Apr-Sep	--	310
Montpelier Creek					
Montpelier (nr)	19.1	137	Apr-Sep	--	13.9
Cub River					
Preston (nr)	73.5	142	Apr-Sep	--	51.8
	67	143	Apr-Jul	--	46.8

1/ Observed flow corrected for storage in Priest Lake.

2/ Observed flow corrected for storage in Coeur d'Alene Lake.

3/ Corrected for storage in Jackson Lake.

4/ Corrected for storage in Jackson Lake and Palisades.

5/ Corrected for storage in Jackson Lake, Palisades, Island Park, Henrys Lake, Grassy Lake and diversions between Heise and Blackfoot.

6/ Corrected for storage in Henrys Lake and Island Park Reservoir.

7/ Corrected for storage in Henrys Lake and Island Park, Grassy Lake and diversions between Aston and Rexburg.

8/ Observed flow corrected for storage in Mackay Reservoir.

9/ Combined flow Big Wood River nr. Bellevue and Camas Creek nr. Blaine.

10/ Corrected for storage in Little Wood Reservoir.

11/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak.

12/ Corrected for storage in Anderson Ranch Reservoir.

13/ Corrected for storage in Wildhorse Reservoir.

14/ From Bureau of Reclamation records of inflow.

15/ Corrected for storage in Cascade and Deadwood Reservoirs.

16/ Corrected for storage in Cascade Reservoir.

Cooperative forecasts released by Soil Conservation Service and National Weather Service.

(c) Assuming normal meteorological conditions.

+ 1961-1980 period

SNOW

DRAINAGE BASIN and or SNOW COURSE				THIS YEAR			PAST RECORD	
				Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME & DRAINAGE		Elevation					Last Year	b Average
Above Burke		Coeur d'Alene	4100	12/29	30	5.8	7.8	8.7*
Arizona	(Wy)	Snake	6820	1/3	42	10.5	10.7	7.9
Antelope Ridge		Owyhee	6180	1/1	32	9.1	4.2	--
Aspen Grove		Willow	6500	1/1		9.8e	7.1	5.1*
Aster Creek	(Wy)	Snake	7750	1/3	51	13.5	15.3	12.5
Atlanta Summit		Boise	7600	1/1		21.8e	21.2	14.6*
Bad Bear		Boise	4940	12/29	42	9.0	7.1	5.4*
Banner Summit		Payette	7040	1/1		16.6e	16.9	--
Base Camp	(Wy)	Snake	7030	1/4	36	9.5	--	8.6
Bear Basin		Little Salmon	5350	1/1		10.0e	12.4	--
Bear Canyon		Big Lost	7900	1/1		9.5e	12.6	6.5*
Bear Saddle		Mann Creek	6180	1/1		15.2e	18.4	--
Bennett Mountain		Canyon Creek	6560	1/2	54	15.6	12.4	--
Benton Meadow		Priest	2370	12/30	20	2.9	3.9	3.0
Benton Spring		Priest	4920	1/3	36	8.6	10.4	8.4
Big Creek Summit		Salmon	6580	12/29	60	16.5	19.9	14.6*
Big Springs		Henry's Fork	6400	12/30	38	9.3	11.7	8.0
Birch Creek		Willow	6800	12/28	27	7.3	5.1	3.7*
Black Bear	(Mt)	Madison	7950	12/29	64	19.0	25.3	16.3
Bloody Dick	(Mt)	Beaverhead	7600	12/27	22	5.2	5.4	--
Blue Ridge		Blackfoot	6780	12/28	50	14.9	11.7	--
Bogus Basin		Payette	6340	12/30	61	18.5	15.8	9.3
Bogus Basin Road		Boise	5540	12/30	36	9.7	6.3	2.7*
Bone		Willow	6200	12/28	24	5.6	4.5	2.6*
Boulder Creek		Weiser	5440	12/29	44	9.6	14.3	9.9
Breezy Saddle		Clearwater	5010	1/6	38	10.0	--	--
Brockman Station		Willow	6430	12/28	29	7.9	5.8	--
Brundage Mountain		Little Salmon	7560	1/1		20.4e	24.5	20.1*
Bruno Creek		Salmon	7920	1/3	42	11.3	10.0	--
Camas Creek Divide		Big Wood	5710	1/2	50	14.7	--	--
Camp Creek		Beaver	6580	12/27	24	4.4	9.0	4.4
Cayuse Airstrip		Clearwater	3500	1/9	23	5.0	--	5.4*
CCC Camp	(Wy)	Salt	7000	12/29	36	8.4	5.0	5.1
Copper Basin		Big Lost	7640	1/1		8.8e	7.5	3.7*
Couch Summit		Boise	6840	1/2	53	13.6	14.3	7.1*
Cozy Cove		Deadwood	5380	1/10	39	10.2	10.5	7.0*
Crater Meadows		Clearwater	5960	1/9	55	18.2	--	18.0*
Crawford Ranger Station		Payette	4860	12/29	23	4.2	6.7	2.9*
Crooked Fork		Lochsa	3610	12/29	24	4.9	4.0	5.3*
Cub River Ranger Station		Cub	5450	12/29	43	11.2	5.0	3.5*
Darby Canyon	(Wy)	Teton	8250	12/28	48	14.1	11.1	9.7*
Deadline		Salmon Falls	7400	12/29	69	21.4	13.8	8.7*
Deadline South		Salmon Falls	7450	12/29	75	22.9	16.8	9.7*
Deadwood Airstrip		Deadwood	5360	1/1		11.0e	11.1	6.4*
Deadwood Summit		Deadwood	6860	1/10	69	23.2	26.1	21.5*
Dollarhide Summit		Big Wood	8420	1/1		18.2e	16.1	11.6*
Elk Butte		Clearwater	5550	1/6	55	14.6	--	--
Emigrant Summit		Bear	7390	1/1		21.1e	13.5	9.6*
Fish Lake Airstrip		Lochsa	5650	1/9	46	12.6	--	16.9*
Forty-nine Meadows		Clearwater	4830	1/6	40	10.4	--	12.1*
Franklin Basin		Cub	8040	12/29	66	20.7	10.7	7.5
Franklin Basin Snotel		Cub	8170	12/29	77	22.8	--	--
Freds Mountain	(Wy)	Teton	8150	1/1		14.6e	11.8	10.4*
Galena		Big Wood	7440	12/28	44	11.5	12.7	7.7
Galena Snotel		Big Wood	7470	12/28	44	12.1	12.5	--
Galena Summit		Big Wood	8780	12/28	50	14.1	16.5	10.2
Garfield Ranger Station		Little Wood	6560	12/27	29	7.2	9.2	4.0*
Gibbons Pass	(Mt)	Bitterroot	7100	12/27	35	8.9	10.6	9.4
Giveout		Montpelier	6860	1/1		8.3e	5.4	4.9*
Glade Creek	(Wy)	Snake	7040	1/3	50	13.3	12.0	9.2
Goat Creek		Salmon Falls	8880	12/28	64	16.8	9.3	7.4*
Graham Ranch		Big Wood	6270	12/28	37	9.5	10.7	5.4
Grassy Lake	(Wy)	Henry's Fork	7265	1/3	65	18.3	16.1	14.6
Greys Boundary	(Wy)	Greys	5720	12/29	34	8.2	4.6	4.4
Grover Park Divide	(Wy)	Salt	7000	12/30	35	8.4	4.2	4.8
Heart Lake Trail	(Mt)	Clark Fork	4800	1/2	35	8.6	7.6	8.5
Hemlock Butte		Clearwater	5810	1/9	62	19.4	--	20.5*
Hilts Creek		Little Lost	8000	12/30	28	4.6	7.0	--
Hoodoo Basin	(Mt)	Clark Fork	6000	1/2	62	18.1	21.2	20.1
Hoodoo Creek	(Mt)	Clark Fork	5900	1/2	58	17.3	18.8	17.8
Howell Canyon		Marsh Creek	7980	1/1		25.2e	15.9	10.5
Huckleberry Divide	(Wy)	Snake	7300	1/3	46	12.2	10.4	9.2

(b) 1961-1980, 20 year period. *Estimated 1961-1980 20 year average.

(A) Aerial observation, water content estimated.

(e) Snow course data estimated from automated Snotel readings.

SNOW

DRAINAGE BASIN and or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME & DRAINAGE	Elevation					Last Year	b Average
Humboldt Gulch	Coeur d'Alene	4250	12/29	23	3.6	6.0	--
Hyndman Creek	Big Wood	7440	1/1		7.8e	10.4	--
Idaho City Townsite	Boise	4000	12/29	29	4.0	3.1	--
Indian Meadows	Teton	8240	12/28	72	22.2	21.7	15.4*
Island Park	Henry's Fork	6290	12/30	35	7.9	10.8	6.4
Jackpine Creek (Wy)	Teton	7350	12/28	46	12.0	12.4	--
Jackson Peak	Boise	7070	1/10	56	16.8	18.1	14.2*
Kilgore	Camas Creek	6320	12/28	28	5.8	8.8	4.4
Lake Fork	Payette	5290	1/2	41	9.1	9.0	7.4*
Lakeview Canyon (Mt)	Beaverhead	6930	12/27	21	5.1	9.8	5.4
Lakeview Ridge (Mt)	Beaverhead	7400	12/27	21	5.1	9.2	4.8
Langford Flat Creek	Salmon Falls	5980	1/3	35	10.1	3.9	--
Lava Creek	Willow	7350	12/28	43	11.9	9.0	5.0*
Lemhi Ridge (Mt)	Beaverhead	8100	12/27	24	5.0	--	--
Lewis Lake Divide (Wy)	Snake	7850	1/3	71	22.5	20.9	17.0
Little Beaver	Montpelier	6970	1/1		9.9e	7.1	5.7*
Little Camas Flat	Boise	4940	1/3	33	8.6	5.8	--
Lolo Pass	Löchsa	5240	12/29	35	8.0	8.8	12.1*
Lookout	Coeur d'Alene	5140	12/30	49	11.2	16.8	14.4
Lost Horse (Mt)	Bitterroot	5940	12/29	39	9.6	10.4	13.3
Lost Lake	Clearwater	6110	1/6	68	20.8	--	--
Lost-Wood Divide	Big Lost	7900	1/1		15.3e	14.2	10.5*
Madison Plateau (Mt)	Madison	7750	12/27	41	10.0	14.5	9.5
Magic Mountain	Rock Creek	6880	12/29	71	20.4	10.8	7.4
Mascot Mine	Big Wood	7780	1/1		7.8e	10.4	6.1*
McRenolds Reservoir	Teton	6720	12/28	39	10.2	10.3	7.8*
Mill Creek Summit	Salmon	8800	1/1		10.6e	13.5	10.1*
Montpelier Creek	Montpelier	6540	1/1		5.7e	3.9	3.3*
Moore's Creek Summit	Boise	6100	12/29	68	24.4	18.3	13.1
Moose Creek	N.F. Salmon	6200	12/28	30	7.6	8.8	7.1*
Moran (Wy)	Snake	6750	1/4	32	7.0	5.4	5.4
Morgan Creek	Salmon	7600	12/28	25	5.9	8.4	5.9*
Mount Baldy	Big Wood	8920	1/2	53	13.6	15.5	8.5
Mud Creek	Willow	7100	12/28	51	15.2	13.4	--
Mud Flat	Owyhee	5730	1/1	35	10.0	4.4	--
Muldoon	Little Wood	6320	12/27	20	4.0	8.2	3.1*
Packsaddle Spring	Teton	8200	12/28	55	17.4	17.6	--
Pierce Ranger Station	Clearwater	3080	12/30	24	4.0	3.4	4.7*
Pine Creek Pass	Teton	6810	12/29	40	10.8	7.4	6.9
Pole Creek Ranger Station	Jarbridge	8360	12/28	63	16.8	11.4	8.7*
Rock Flat Summit	Payette	5310	12/31	44	9.6	12.3	7.3
Saddle Mountain (Mt)	Bitterroot	7940	12/27	37	9.5	11.2	10.7
Salt River Summit (Wy)	Salt	7700	12/29	42	9.8	6.4	6.3
Sawtell Mountain	Henry's Fork	8720	12/30	65	20.7	23.1	13.7*
Schweitzer Basin	Pend Oreille	6090	1/1		19.2e	24.1	--
Schweitzer Bowl	Pend Oreille	4800	1/1		11.2e	18.6	13.5*
Schweitzer Ridge	Pend Oreille	6200	1/1		16.8e	26.3	21.1*
Secesh Summit	Payette	6520	1/7	49	14.8	20.6	14.8*
Shanghai Summit	Clearwater	4570	1/6	36	9.1	--	9.8*
Sherwin	St. Maries	3200	1/3	28	6.4	4.4	5.6*
Shoshone Basin	Salmon Falls	5810	1/3	33	9.3	4.6	3.0*
Slug Creek Divide	Blackfoot	7230	1/1		10.6e	7.4	6.8*
Snake River Station (Wy)	Snake	6920	1/3	45	11.0	9.2	8.5
Snow King Mtn. #3 (Wy)	Gros Ventre	7660	12/29	32	8.0	7.6	6.8
Soldier Ranger Station	Big Wood	5740	1/2	44	10.5	12.8	4.7*
Somsen Ranch	Willow Creek	6840	1/1		10.8e	6.3	5.8*
South Mountain	Jordan-Owyhee	6500	12/31	60	18.0	11.3	5.1
Squaw Flat	Weiser	6240	1/2	45	11.0	17.5	9.1
Squaw Meadow	Payette	5900	1/7	49	15.6	20.9	15.8
State Line	Teton	6660	12/29	34	9.3	6.9	6.0
Stickney Mill	Big Lost	7430	1/1		9.0e	7.2	3.0*
Swede Peak	Little Wood	7640	12/27	39	11.5	13.4	7.6*
Targhee Pass	Henry's Fork	6980	12/30	30	6.6	9.0	6.1*
Thumb Divide (Wy)	Snake	7980	1/3	35	8.4	9.7	8.6
Togwotee Pass (Wy)	Snake	9580	1/4	55	16.5	13.2	13.6
Trinity Mountain	Boise	7770	1/1		25.4e	26.6	18.5*
Twelve Mile Creek (Mt)	Bitterroot	5600	12/29	32	7.1	7.9	8.5
Twin Lakes (Mt)	Bitterroot	6510	12/29	45	11.8	13.2	17.2
Twitchell Canyon	Blackfoot	6300	12/30	42	10.2	10.1	--
Valley View	Henry's Fork	6680	12/30	30	6.9	10.1	6.2
Vienna Mine	Salmon	8960	1/1		22.4e	19.2	15.0*
West Branch	Weiser	5560	12/29	45	10.0	14.8	--

(b) 1961-1980, 20 year period. *Estimated 1961-1980 20 year average.

(A) Aerial observation, water content estimated.

(e) Snow course data estimated from automated Snotel readings.

SNOW

DRAINAGE BASIN and or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME & DRAINAGE		Elevation				Last Year	<i>b</i> Average
Wet Creek Summit	Little Lost	7680	12/30	28	6.0	11.2	4.3*
Whiskey Creek	(Mt) Madison	6800	12/27	38	9.0	11.5	7.1
Whiskey Flat	Montpelier	6960	1/1		6.7 ^e	5.2	3.6*
White Elephant	Henry's Fork	7710	12/30	46	13.3	15.3	9.1*
Willow Flat	Cub	6070	12/29	59	16.4	7.4	6.1*

(b) 1961-1980, 20 year period. *Estimated 1961-1980 20 year average.

(A) Aerial observation, water content estimated.

(e) Snow course data estimated from automated Snotel readings.

SNOTEL 1/

Data Site Name	Drainage	Date	Pillow Snow Water Equivalent (inches)	Precipitation Water Year (Accumulative) (inches)
Atlanta Summit	Boise	12/31	19.1	24.2
Banner Summit	Payette	1/1	14.7	20.4
Base Camp	Upper Snake	1/1	8.8	14.1
Bear Basin	Little Salmon	1/1	9.3	14.5
Bear Canyon	Big Lost	1/1	8.3	12.6
Bear Creek	Jarbridge	12/31	19.5	21.0
Bear Mountain	Clark Fork	1/1	17.0	30.0
Bear Saddle	Mann Creek	1/1	14.6	15.9
Bennett Mountain	Canyon Creek	1/1	19.1	19.8
Big Creek Summit	Salmon	1/1	15.4	21.8
Big Sandy Opening	Green	1/1	NA	8.4
Blind Bull Summit	Green	1/1	15.3	15.9
Bostetter Ranger Station	Trapper	1/1	NA	17.3
Bunchgrass Meadow	Pend Oreille	1/1	12.8	20.9
Cottonwood Lake	Salt	1/1	14.1	20.7
Coulter Creek	Upper Snake		NA	NA
Cozy Cove	Deadwood	1/1	12.9	19.2
Crab Creek	Camas-Beaver	12/30	NA	14.2
Deadwood Summit	Deadwood	12/31	22.5	26.9
Dollarhide Summit	Big Wood	1/1	18.4	18.9
Elk Butte	Clearwater	1/1	18.8	23.1
Elkhart Park Guard Station	Green	12/30	8.7	10.1
Emigrant Summit	Bear	1/1	24.5	26.4
Franklin Basin	Cub	1/1	23.1	23.9
Galena	Big Wood	1/1	11.2	15.0
Galena Summit	Big Wood	1/1	NA	14.6
Garfield Ranger Station	Little Wood	12/30	NA	11.2
Giveout	Montpelier	1/1	8.8	11.1
Goat Creek	Salmon Falls	1/1	18.2	20.3
Graham Guard Station	Boise	1/1	11.2	18.1
Grassy Lake	Upper Snake	12/30	16.9	26.7
Gros Ventre Summit	Upper Snake	1/1	NA	9.9
Hemlock Butte	Clearwater	1/1	19.7	21.4
Hilts Creek	Little Lost	12/30	NA	9.2
Howell Canyon	Marsh Creek	1/1	21.9	24.5
Humboldt Gulch	Coeur d'Alene	1/1	4.4	16.0
Hyndman	Big Wood	1/1	6.4	11.6
Indian Creek	Green	1/1	18.6	19.1
Island Park	Henrys Fork	1/1	7.5	14.6
Jackson Peak	Boise	1/1	16.2	22.3
Kelly Ranger Station	Green	1/1	13.2	15.3
Lewis Lake Divide	Upper Snake	1/1	17.0	25.9
Lolo Pass	Lochsa	1/1	10.2	13.1
Lookout	Coeur d'Alene	1/1	NA	18.6
Loomis Park	Green	12/31	9.2	12.1
Lost Lake	Clearwater	1/1	24.0	28.1
Lost-Wood Divide	Big Lost	1/1	11.6	15.6
Magic Mountain	Rock Creek	1/1	20.2	21.9
Meadow Lake	Lemhi	1/1	NA	11.4
Mill Creek Summit	Slamon	12/29	10.1	11.5
Moonshine	Little Lost	1/1	5.4	9.1
Moore's Creek Summit	Boise	1/1	21.4	22.8
Moose Creek	North Fork Salmon	12/31	8.3	11.4
Morgan Creek	Salmon	1/1	7.1	10.9
Mosquito Ridge	Coeur d'Alene	1/1	13.1	19.4
Mountain Meadows	Selway	1/1	8.6	13.4
Mud Flat	Owyhee	1/1	NA	13.9
Oxford Spring	Malad		NA	NA
Phillips Bench	Upper Snake	12/31	14.2	19.1
Pole Creek Ranger Station	Salmon Falls	1/1	16.4	13.0
Prairie	Boise	12/30	NA	11.4
Salt River Summit	Salt	1/1	9.7	14.8
Savage Pass	Lochsa	1/1	8.9	14.2
Schweitzer Basin	Pend Oreille	12/31	19.2	23.1
Secesh Summit	Payette	1/1	15.2	22.4
Shanghi Summit	Clearwater		NA	NA
Sheep Mountain	Willow	1/1	9.9	13.4
Sherwin	St. Maries	1/1	5.7	17.8
Slug Creek Divide	Blackfoot	1/1	12.3	16.9
Snider Basin	Green	1/1	8.2	9.2
Somson Ranch	Willow Creek	1/1	10.1	14.0
South Mountain	Jordan-Owyhee	1/1	21.5	NA
Spring Creek Divide	Green	1/1	16.1	17.6
Squaw Flat	Weiser	1/1	8.9	16.8
Stickney Mill	Big Lost	1/1	5.1	6.4

1/ Data readings as reported by automated Snotel system.

NA Data not available.

SNOTEL ^{1/}

Data Site Name	Drainage	Date	Pillow Snow Water Equivalent (inches)	Precipitation Water Year (Accumulative) (inches)
Sunset	Coeur d'Alene	1/1	12.3	18.8
Swede Peak	Little Wood	1/3	9.7	13.8
Togwotee Pass	Upper Snake	1/1	13.6	19.2
Touchet #2	Touchet	1/1	12.3	19.5
Trinity Mountain	Boise	1/1	24.5	26.4
Two Ocean Plateau	Upper Snake	1/1	14.8	17.1
Vienna Mine	Salmon	1/1	NA	20.3
West Branch	Weiser	1/1	11.8	17.3
White Elephant	Henrys Fork	1/1	13.7	21.7
Wildhorse Divide	Portneuf	1/1	NA	17.7
Willow Creek	Greys	1/1	21.8	27.3

^{1/} Data readings as reported by automated Snotel system.
 NA Data not available.

GOVERNMENT AGENCIES

States

Idaho Department of Water Resources
Montana Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Cooperative Snow Surveys
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U. S. Army Engineers

U. S. Department of Agriculture
Forest Service

U. S. Department of Commerce
NOAA, National Weather Service

U. S. Department of Interior
Bureau of Reclamation
Water Resources Division, Geological Survey
Shoshone-Bannock Tribal Council

PUBLIC UTILITIES

Washington Water Power Company
Idaho Power Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Blaine Soil Conservation District
Boise Project Board of Control
Idaho Water District #01
Little Wood River Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control
Valley Soil Conservation District
Portneuf Soil and Water Conservation District
East Cassia Soil and Water Conservation District
West Cassia Soil and Water Conservation District
Camas Soil and Water Conservation District

PRIVATE ORGANIZATIONS

FMC Corporation
Cyprus Mining Company

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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